



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,343	06/02/2006	Hirofuma Fujimaru	0075868-000097	5041
21839 7590 10/14/2011 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404				
EXAMINER				
SASTRI, SATYA B				
ART UNIT		PAPER NUMBER		
1762				
NOTIFICATION DATE		DELIVERY MODE		
10/14/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com
offserv@bipc.com

Office Action Summary

Application No.

10/581,343

Applicant(s)

FUJIMARU ET AL.

Examiner

SATYA SASTRI

Art Unit

1762

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-7,9 and 11-24 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☒ Claim(s) 14 is/are allowed.
- 7) ☒ Claim(s) 1-7,9,11-13,15-22 and 24 is/are rejected.
- 8) ☒ Claim(s) 23 is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-089)
Paper No(s)/Mail Date 6/8/11
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: Handbook of fillers, 3 pages

DETAILED ACTION

1. This office action is in response to amendment filed on 8/17/11. Claims 1-7, 9, 11-24 are now pending in the application.

Previously Cited Statutes

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-7, 9, 15, 16, 17, 18, 19, 20, 21, 22, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajikawa et al. (US 2003/0020199 A 1).

The rejections are adequately set forth in paragraph 4 of the office action dated 5/18/11 and are incorporated herein by reference.

4. Claims 1-7, 9, 11-13, 15-22, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajikawa et al. (US 2003/0020199 A1) in view of JP02178332 A (DERWENT Ab.)

The rejections are adequately set forth in paragraph 5 of the office action dated 5/18/11 and are incorporated herein by reference.

Response to Arguments

5. Applicant's arguments with regard to the rejection of claim 3 under 35 U.S.C. 112, second paragraph as being indefinite are deemed persuasive and the rejection is withdrawn. Additionally, allowable claim 14 and allowable subject matter indicated for claims 23 are maintained as set forth in the previous office action. Applicant's arguments with regard to the obviousness rejections are not deemed persuasive and the rejections are maintained herein for the following reasons:

Applicants argue that the Kajikawa et al. reference (1) does not suggest the amount of monovalent counterion in the range of 10 to 65 mol% as recited in claims 1, 2, 17-19, (2) fails to disclose the solubility of the polyvalent metal compound is more than 0 and less than 10.0g in 100 g of deionized water at 20°C and (3) does not disclose or suggest the presently recited absorption property.

In response to (1), it is noted that the prior art teaches an overlapping range of the monovalent counterion, i.e. the disclosed range of 30-65 mol% overlaps with the presently recited range. As noted in the previously set forth rejection, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 91 USPQ 90 (CCPA 1976). See MPEP § 2144.05.

With regard to (2), it is noted that the prior art of record discloses water insoluble fine particles such as silicon oxide (trade name AEROSIL™), titanium dioxide and aluminum oxide (0187). As noted in the previously set forth rejections, instant specification ([0063], PGPUB) discloses silicon oxide as a concrete example of polyvalent metal compound (B). More importantly, working example 2 [0302] in the Kajikawa et al. disclosure exemplifies a surface modifying step using inorganic fine particles of AEROSIL 200. Evidence reference, Handbook

of Filler, by Wypych, George 2000, Chem tech publishing, Chapter 2, pages 132, 154 discloses water solubilities of silica and titanium dioxide that are disclosed as insoluble fine particles in Kajikawa et al. reference. The disclosed water solubility of silica in the evidence reference is 0.015% and AEROSIL 200 is disclosed as a hydrophilic grade of fumed silica. It is the examiner's position that hydrophilic silica would necessarily meet the presently recited solubility limit of claim 1, i.e. "greater than 0". Likewise, the disclosed water solubility of titanium dioxide in the evidence reference is 0.3 to 0.5%. Although the temperature at which the solubility is measured is not disclosed in the evidence reference, it is the examiner's position that room temperature solubility is disclosed, absent evidence to the contrary. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons herewith." In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

With regard to (3), it would have been obvious to one of ordinary skill in the art that the water absorption capacity is a property of the resin composition and given that the presently claimed resin composition is obviated by the reference, the presently recited property must necessarily be present in the disclosed compositions that overlap in scope with the present invention. When the reference discloses all the limitations of a claim except a property or a function and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, the examiner has basis for shifting the burden of proof to applicant as in In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112- 2112.02.

Applicants further state on page 4 that the instant specification, on page 13, discloses the advantages for the presently claimed range of monovalent counter ion content. Applicants further refer to examples in the specification to establish the criticality for the claimed range of monovalent ion content. Examiner fails to find such data convincing. Specifically, attention is drawn to examples 5 and 6 that include WRM (5) and WRM (6) with 70 mol% ion content. Although the ion content is outside of the presently claimed range, none the less, WRM (5) and WRM (6) aid the growth of root hair.

Applicants further contend that the presently claimed absorption capacity and the calcium gradual release index would not inherently be present in the Kajikawa et al. compositions that overlap with the present invention. Although the instant method of polymer production differs from that of Kajikawa et al. as noted by the applicants, there is no evidentiary data to illustrate the difference in products obtained by the two different methods.

With regard to the rejections over the combination of Kajikawa et al. and Hayashi et al., it is noted that examiner has specifically relied on the secondary reference to teach in calcium ion source in the Kajikawa et al. absorbent resins. Such salts are disclosed in the instant specification as being sparingly soluble in water and therefore, they must necessarily satisfy the solubility criteria recited in instant claims, i.e. the solubility criteria as set forth in the claims are necessarily met by the combination of cited references. Therefore, it is not clear why the rejections over combination of cited references are not tenable. The Kajikawa reference discloses water absorbent resins and the Hayashi reference clearly provides a motivation for incorporating inorganic powders such as calcium sulfate and calcium hydroxide in water absorbent resins, i.e.

for antistatic treatment to prevent dust explosion in air transportation, adhesion to packaging bag and damage of apparatus due to electrical discharge.

In light of above, the present action is properly made final.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 272 1112. The examiner can be reached on Mondays, Thursdays and Fridays, 7AM-5.30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David Wu can be reached on 571-272-1114.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Satya B Sastri/

Primary Examiner, Art Unit 1762